Power Mac G4

Buckle up—the Power Mac G4 is here. It features the revolutionary PowerPC G4 with Velocity Engine, which crunches multimedia data at blazing-fast speeds. The Velocity Engine uses true independent vector processing—a technology originally developed for use in scientific supercomputers. You get the power you need to work with complex graphics files and even make movies at your desktop. It adds up to unprecedented productivity for creative professionals—in the arts as well as the sciences.

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Features

Superior performance

- PowerPC G4 processor running at up to 500 MHz and featuring Velocity Engine advanced vector processing technology
- 1MB of backside level 2 cache running at half the processor speed
- Built-in 10/100BASE-T Ethernet networking
- ATI RAGE 128 Pro graphics card with 16MB of graphics memory, VGA connector, and DVI connector for Apple digital flat-panel displays

Professional-quality Desktop Movies

- Key subsystems tuned for the processing, memory, throughput, and expansion needs of the video editor
- Three 400-Mbps FireWire ports for connecting digital video camcorders, hard disk drives, and high-speed multimedia peripherals
- Support for more than 100GB of internal hard disk storage for hours of video
- DVD-ROM drive for playback of DVD movies, DVD-ROM and DVD-RAM discs, and CDs; or rewritable DVD-RAM drive with DVD-Video playback

Maximum expansion

- Support for up to 1.5GB of high-performance PC100 SDRAM[2]
- Four expansion slots, including three 64-bit PCI slots and one dedicated AGP 2X graphics card slot
- Two Universal Serial Bus (USB) ports for connecting up to 127 peripherals

Elegant design

- "Instant access" side door that makes it very easy to install cards, drives, and memory
- Built-in antenna and support for optional AirPort wireless networking
- "Instant-on" low-power sleep/wake feature that virtually eliminates the need to shut down the computer

[1] In processor measurements and Photoshop tests.

[2] 999MB maximum per application.

Apple designed the Power Mac G4 for creative professionals who use computers as the pivotal tool of their trade, setting the pace of their work, their productivity, even their success. With its Pentium-crushing speed and convention-crushing design, the Power Mac G4 is so powerful that its speed is measured in gigaflops, or billions of floating-point operations per second, just like supercomputers. Almost no other desktop computer can beat its performance, especially when running the applications creative professionals use most, such as Adobe Photoshop.[1] Just add a DV camcorder and Final Cut Pro software, and you've got a professional-quality desktop movie studio.

At the heart of this system is the exceptional PowerPC G4 with Velocity Engine. Using vector processing, the PowerPC G4 brings supercomputer performance to the desktop for the first time. The Velocity Engine moves vector and multimedia data at superefficient speeds—it can process data in 128-bit chunks, instead of the smaller 32-bit or 64-bit chunks used in traditional processors. System performance is further enhanced through the use of a superfast system bus and 1 megabyte of backside cache.

The Power Mac G4 brings cutting-edge graphics technology to the desktop. It's the first computer to use the industry-leading ATI RAGE 128 Pro graphics card. Enhanced 2D performance means images, models, and photos build faster on screen and look more realistic. Even more spectacular is the system's 3D performance, which dramatically enriches the experience of virtual reality applications, websites, and games. And with its direct access to main memory, ATI accelerated drivers, and Apple's OpenGL software, graphics professionals will find that whole new opportunities come into view.

The Power Mac G4 can turn your desktop into a professional moviemaking studio. FireWire and USB ports let you connect to high-bandwidth peripherals such as digital video camcorders, hard disk drives, scanners, and more. The Power Mac G4 can accommodate more than 100 gigabytes of hard disk storage—enough for hours of video footage—and up to 1.5 gigabytes of SDRAM[2] for superfast image manipulations. Add Apple's Final Cut Pro video editing software, and you've got the ultimate video editing, compositing, and special effects tool.

The Power Mac G4 is also ready to expand into wireless communications. Just install the optional AirPort Card, connect to an AirPort wireless network, and start surfing from your business, classroom, or any room in your home. For wired communications, fast 10/100BASE-T Ethernet networking is built in for rapid transfer of large graphics files.

Now there's a computer that can keep up with everything your mind can imagine—as quickly as you can imagine it. Power Mac G4.

Technical Specifications

Processor
- 400-, 450-, or 500-MHz PowerPC G4 processor
- Velocity Engine vector processing unit with 162 integrated Single Instruction Multiple Data (SIMD) instructions
- Full 128-bit internal memory data paths
- Powerful new floating-point unit supporting single-cycle, double-precision calculations
- Data stream prefetching operations supporting four simultaneous 32-bit data streams
- 1MB backside level 2 cache running at half the processor speed
- 100-MHz system bus supporting up to 800-MBps data throughput

Memory
- 64MB, 128MB, or 256MB of PC100 SDRAM (3.3-volt, unbuffered, 64-bit-wide, 168-pin, running at 100 MHz)
- Four DIMM slots support up to 1.5GB of PC100 SDRAM (999MB maximum per application) using the following DIMMs:
  - 32MB, 64MB, or 128MB DIMMs (64-bit-wide, 64-Mbit technology)
  - 128MB or 256MB DIMMs (64-bit-wide, 128-Mbit technology)
  - 512MB DIMMs (64-bit-wide, 256-Mbit technology)

Storage[1]
- One of the following hard disk drives:
  - 10GB 7200-rpm Ultra ATA/66 hard disk
  - 20GB 7200-rpm Ultra ATA/66 hard disk
  - 27GB 7200-rpm Ultra ATA/66 hard disk
- One of the following optical drives:
  - DVD-ROM drive with DVD-Video playback
  - DVD-RAM drive with DVD-Video playback
- 100MB Zip drive (some configurations)
- Three 3.5-inch hard disk drive expansion bays
  - One ATA drive preinstalled in standard configurations
  - Support for up to two internal ATA drives
  - Support for up to three internal SCSI drives

Graphics support
- ATI RAGE 128 Pro graphics card with 16MB of SDRAM graphics memory installed in a dedicated AGP 2X graphics slot
- Support for up to 1920- by 1200-pixel resolution at 32 bits per pixel (millions of colors) and up to 85-Hz refresh rate
- 15-pin mini D-Sub VGA connector
- Digital Visual Interface (DVI) 24-pin connector with Transition Minimized Differential Signaling (TMDS)

Peripheral connections
- Three 400-Mbps FireWire ports (one internal)
- Two USB ports (12 Mbps each; 24 Mbps total)

Communications
- 10/100BASE-T Ethernet connector (RJ-45)
- Optional 11-Mbps AirPort Card; IEEE 802.11 DSSS compliant
- Optional AirPort Base Station containing 56K modem and 10BASE-T Ethernet port
- Built-in 56K V.90 modem card[2] (some configurations)

Expansion
- Three full-length 64-bit, 33-MHz PCI slots open
- One AGP 2X slot with graphics card

Audio
- One input and one output analog minijack supporting 16-bit stereo audio; 44.1-kHz sampling rate
- Built-in speaker
- Support for external third-party USB digital audio peripherals such as microphones, speakers, and MIDI devices
- Support for external third-party FireWire digital audio peripherals such as CD-RW drives and DVD jukeboxes

Keyboard and mouse
- Apple USB Keyboard with 2-meter cable
- Apple USB Mouse

Electrical requirements and agency approvals
- Line voltage: 115V AC (90V to 132V AC) or 230V AC (180V to 264V AC)
- Frequency: 47 to 63 Hz, single phase
- Maximum continuous power (not including display): 200W
- EPA ENERGY STAR compliant

Environmental requirements
- Operating temperature: 50° to 95° F (10° to 35° C)
- Storage temperature: –40° to 116° F (–40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 feet (3,048 m)

Size and weight
- Height: 17.0 inches (43.2 cm)
- Width: 8.9 inches (22.6 cm)
- Depth: 18.4 inches (46.7 cm)
- Weight: 30.0 pounds (13.6 kg)[3]

[1] Storage devices vary among configurations; see Configurations chart for details.

[2] Actual modem speeds lower; speed depends on connection rate and other factors.

[3] Weight varies depending on configuration.

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Configurations

Order no.	M7641LL/A	M7628LL/A	M7629LL/A
Processor speed	400 MHz	450 MHz	500 MHz
Memory (PC100 SDRAM)	64MB (one DIMM)	128MB (one DIMM)	256MB (one DIMM)
Backside level 2 cache	1MB at 200 MHz	1MB at 225 MHz	1MB at 250 MHz
Hard disk drive	10GB Ultra ATA/66	20GB Ultra ATA/66	27GB Ultra ATA/66
Optical drive	DVD-ROM with DVD-Video playback	DVD-ROM with DVD-Video playback	5.2GB DVD-RAM with DVD-Video playback
Zip drive	Optional	Yes	Yes
FireWire ports	Three 400-Mbps ports	Three 400-Mbps ports	Three 400-Mbps ports
USB ports	Two ports (12 Mbps each; 24 Mbps total)	Two ports (12 Mbps each; 24 Mbps total)	Two ports (12 Mbps each; 24 Mbps total)
Wireless networking	Optional	Optional	Optional
56K modem	Yes	Yes	Optional

All models also include:

Apple USB Keyboard, Apple USB Mouse, Mac OS 9, Microsoft Internet Explorer, Netscape Communicator, Adobe Photoshop Velocity Engine plug-in, and complete setup, learning, and reference documentation.

Product contains some electronic documentation. Backup software provided on CD-ROM.

For More Information

For more information about this product, visit www.apple.com/powermac. To find the latest information on hardware and software for your Power Mac, visit the Macintosh Products Guide at www.apple.com/guide.

To purchase this product from the Apple Store, go to www.apple.com/store or call 800-MY-APPLE. To find an authorized Apple reseller in your area, call 800-538-9696.

Apple offers a free suite of Internet services on www.apple.com that make using the web more productive and fun. Register for iTools, a group of membership-based services including an exclusive mac.com email address and iDisk, which gives you 20MB of free storage space on Apple's Internet servers. Other services include HomePage, a web page builder; KidSafe, to keep the Internet a safe place for children; iReview, website reviews written for the Apple community; and iCards, high-quality electronic greeting cards.

Safeguard your Power Mac for three full years with the optional AppleCare Protection Plan. You'll benefit from a host of services, including powerful diagnostic software tools, online support, regular email updates, and Apple's toll-free helpline. And for most problems, no problem: We'll fix your hardware for the next three years. You have the assurance of being helped by Apple certified technicians using genuine Apple parts—and the reassurance of knowing that your Power Mac is covered. For more information, visit www.apple.com/support.

Build-to-Order Options

In addition to choosing from among Apple's prebuilt systems, you can order a custom-configured computer from your authorized Apple reseller or the online Apple Store. Build-to-order options include the following. For up-to-date information about options and availability, visit www.apple.com/store.

Processor	Memory	Hard Disk Drives	Optical Drives	Other Options
400 MHz	64MB	10GB ATA	DVD-ROM	AirPort Card
450 MHz	128MB	20GB ATA	DVD-RAM	AirPort Base Station
500 MHz	256MB	27GB ATA		ATI RAGE 128 PCI cards
	384MB	18GB Ultra2 SCSI*		SCSI PCI card
	512MB	36GB Ultra2 SCSI*		56K modem**
	768MB			Zip drive
	1GB			
	1.5GB			

*SoftRAID included with any Ultra2 SCSI hard disk drive.

**FAXstf included with modem.

Displays

- Apple CRT displays
  - —Apple Studio Display (17-inch; 16-inch viewable); order no. M6221
  - —Apple Studio Display (21-inch; 19.8-inch viewable); order no. M6204
- Apple digital flat-panel displays
  - —Apple Studio Display (15-inch); order no. M7612
  - —Apple Cinema Display (22-inch); order no. M7478

The Apple Cinema Display is available through the online Apple Store.

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